

ABSTRACT OF THE DISCLOSURE

A method for implementing error diffusion process with memory management is disclosed to separate several small blocks in one image that needs to be error diffused. The size of every small block is smaller than the internal static random access memory (SRAM) size. When doing error diffusion on one small block, the pixels located at the edge of the block that cannot be diffused are reserved in the SRAM or the dynamic random access memory (DRAM). When doing error diffusion on the next block, the previous reserved pixels are reused. These steps are repeated to process all the blocks until the whole image is finished with error diffusion. This method can reduce external DRAM access times, use smaller internal SRAM sizes and improve the performance of the image process hardware.